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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/767,546	01/23/2001	Pradcep K. Subrahmanyam	S01.12-0644	3008

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EXAMINER

SNIEZEK, ANDREW L

ART UNIT PAPER NUMBER

2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/767,546

Applicant(s)

SUBRAHMANYAN, PRADEEP K.

Examiner

Andrew L. Sniezek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-23 and 28-30, 32-35 is/are rejected.
- 7) ☐ Claim(s) 24-27, 31 and 36 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following action is taken in view of the amendment filed 12/27/06.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 20-23, 28, 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Repperger (US 5,101,472)

Re claims 20, 22: Reppenger teaches an apparatus (figure 3) that adaptively generates an output (320) responsive to a sensed signal (303) a desired position signal (308) and at least one of a torque and an inertia (322), wherein the apparatus includes a controller circuit (314) that has gain(s) K_p and K_v that are adapted in fixed range(s), for example equations (39 and 40) that are functions of adaptive parameter data that are based on at least torque and inertia (as described throughout columns 7-15).

Re claim 21: the update equation can be considered to by the new torque equation that is formed through each adaptive computation.

Re claim 23: See operation of controller (314)

Re claim 28: Reppenger teaches an apparatus (figure 3) comprising adaptive parameter data that are based on at least torque and inertia (as described throughout columns 7-15) and a controller circuit (302, 304, 306, 314) receiving sensed position (303) and a desired position (308) and adaptively generates an output (320) and provides a gain

(kp, Kv) adapted in ranges (equations 39, 40) as functions of the adaptive parameter data.

Re claim 32, 34: Reppenger teaches an apparatus that operates along a method that adaptely generates an output (320) responsive to a sensed signal (303) a desired signal (308) and at least on of a torque and inertia (as described throughout columns 7-15) and providing a controller gain (Kp and Kv) that are adapted in fixed range(s), for example equations (39 and 40) that are functions of adaptive parameter data that are based on at least torque and inertia (as described throughout columns 7-15).

Re claim 33: Not output (320) that is controlled based on adaptive parameter data as described throughout columns 7-15.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Repperger.

The teaching of Repperger is discussed above and incorporated herein. Claim 29 additionally sets forth first and second controllers that are stable. In Repperger it appears that there is only one controller (314) that is stable (column 7, line 33). Dividing a single controller into a plurality (two) controllers that would perform the same function as one controller is deemed to amount to an obvious variation in which one of ordinary

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skill in the art could have made through routine engineering. The use of error models are satisfied by operation described in column 5, lines 1-45.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 35 sets forth instructions that are stored in a computer readable program storage device that are used to digitally update in real time the adaptive parameter data. The specification does not provide any set of instructions that can be used to achieve the updated parameter data. One skilled in the art could not form **applicant's intended** set of instructions, given the present specification since it appears that there could be numerous instructions that could be given to achieve the desired result.

Allowable Subject Matter

8. Claims 24-27, 31, 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: The claimed apparatus as set forth in claim 24/23/20 that further comprises an

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actuator (used to position transducers in disk drives as disclosed) and wherein the output comprises an electric current couple to the actuator is neither taught by nor an obvious variation of the art of record. Claims 25-27 depend on claim 24.

The claimed apparatus as set forth in claim 31/28 wherein the sensed position signal is a signal sensed by a read/write head, of a disk drive for generating an electric current output for control of an actuator, as disclosed, is neither taught by nor an obvious variation of the art of record.

The claimed method as set forth in claim 36/32 wherein the adaptively generated output as previously discussed in claim 32 is couple to a voice coil motor in a disk drive to position an actuator as disclosed is neither taught by nor an obvious variation of the art of record.

Response to Arguments

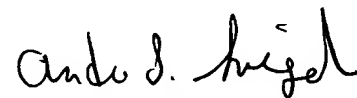
10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Sniezek whose telephone number is 571-272-7563. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Andrew L. Snizek
Primary Examiner
Art Unit 2627

ALS
4/15/07